

WHAT IS CLAIMED IS:

1. A method for processing a query of a travel database, comprising:  
receiving a selected arrival location and a selected departure location;  
finding a set of desirable fares between the arrival location and the departure location;  
constructing possible itineraries between the arrival location and the departure location associated with the desirable fares;  
applying a set of rules to the possible itineraries;  
querying an availability portion of the travel database for available travel units for the one or more travel segments based upon the applied set of rules and the possible itineraries; and  
displaying the available travel units in a calendar-based user interface.
2. The method of claim 1, wherein the calendar-based user interface displays applicability data and availability data simultaneously.
3. The method of claim 2, wherein applicability data comprises an indication of whether a travel unit is allowed on a prespecified day based on the set of rules.
4. The method of claim 2, wherein the availability data comprises an indication of whether a travel unit is at least one of (1) available for sale and (2) sold out.

5. The method of claim 2, wherein the calendar-based user interface comprises a display of at least a portion of a calendar.

6. The method of claim 5, wherein the display further includes user-selectable hyperlinks for selecting a desired travel date.

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7. An apparatus for processing a query of a travel database, comprising:  
a memory for storing an application program; and  
a processor coupled to the memory, the processor configured under control of  
the application program to:

receive a selected arrival location and a selected departure location,  
find a set of desirable fares between the arrival location and the  
departure location,

construct possible itineraries between the arrival location and the  
departure location associated with the desirable fares,

apply a set of rules to the possible itineraries,

query an availability portion of the travel database for available travel  
units for the one or more travel segments based upon the applied set of rules and  
the possible itineraries, and

cause the available travel units to be displayed in a calendar-based  
user interface.

8. The apparatus of claim 7, wherein the calendar-based user interface  
displays applicability data and availability data simultaneously on a display unit.

9. The apparatus of claim 8, wherein applicability data comprises an  
indication of whether a travel unit is allowed on a prespecified day based on the set  
of rules.

10. The apparatus of claim 8, wherein the availability data comprises an indication of whether a travel unit is at least one of (1) available for sale and (2) sold out.

11. The apparatus of claim 8, wherein the calendar-based user interface comprises a display on the display unit of at least a portion of a calendar.

12. The apparatus of claim 11, wherein the display further includes user-selectable hyperlinks for selecting a desired travel date.

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13. A calendar-based user interface for displaying query results from a database containing travel data comprising:

a calendar showing a plurality of days corresponding to the query;

an availability indicator for each of the plurality of days showing available itineraries relating to the query; and

an applicability indicator for each of the plurality of days showing itineraries relating to the query which apply based on a set of rules and restrictions from travel providers.

14. The user interface of claim 13, wherein the availability indicator comprises a shaded day within the calendar for indicating whether a travel unit is available on the shaded day.

15. The user interface of claim 13, wherein the availability indicator comprises an availability icon associated with a day within the calendar for indicating whether a travel unit is available on the associated day.

16. The user interface of claim 13, wherein the availability indicator comprises a user-selectable hyperlink associated with a day within the calendar for indicating whether a travel unit is available on the associated day.

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17. The user interface of claim 13, wherein the applicability indicator comprises a shaded day within the calendar for indicating whether a travel unit is applicable on the shaded day.

18. The user interface of claim 13, wherein the applicability indicator comprises an applicability icon associated with a day within the calendar for indicating whether a travel unit is applicable on the associated day.

19. The user interface of claim 13, wherein the applicability indicator comprises a user-selectable hyperlink associated with a day within the calendar for indicating whether a travel unit is applicable on the associated day.

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20. A method for administering an availability portion of a relational travel database, comprising:

receiving an availability message from a first travel provider;

analyzing the availability message to determine one or more affected travel segments;

querying a schedule portion of the relational travel database for the one or more affected travel segments; and

writing a record to an availability portion of the relational database based on a status portion of the availability message if the one or more affected travel segments are found in the schedule portion of the relational database.

21. The method of claim 20, further comprising:

initializing the relational travel database by processing a snapshot of existing availability messages at a predetermined time into the availability portion of the relational travel database.

22. The method of claim 20, further comprising:

placing the availability message in a queue corresponding to the first travel provider.

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23. The method of claim 22, further comprising:  
processing the availability message corresponding to the first travel provider  
in parallel with an additional availability message corresponding to a second travel  
provider.

24. The method of claim 20, further comprising:  
adding the availability message to an alternative processing queue if the one  
or more affected travel segments are not found in the schedule portion of the  
relational database.

25. The method of claim 20, further comprising:  
determining one or more travel legs corresponding to each of the one or more  
affected travel segments, including an origin leg and a destination leg;  
determining a leg number for each of the one or more travel legs;  
determining a first leg and a last leg associated with each of the one or more  
affected travel segments;  
identifying affected travel segments whose leg number of the first leg is at  
least the leg number of the origin leg and whose leg number of the last leg is at most  
the leg number of the destination leg; and  
writing a record to the availability portion of the relational database based on  
a status portion the availability message for each identified affected travel segment.



26. An apparatus for administering an availability portion of a relational travel database, comprising:

a memory for storing an application program; and

a processor coupled to the memory and operatively connected with the relational travel database, the processor configured under control of the application program to:

receive an availability message from a first travel provider,

analyze the availability message to determine one or more affected travel segments,

query a schedule portion of the relational travel database for the one or more affected travel segments, and

write a record to an availability portion of the relational database based on a status portion of the availability message if the one or more affected travel segments are found in the schedule portion of the relational database.

27. The apparatus of claim 26, wherein the processor is further configured to:

initialize the relational travel database by processing a snapshot of existing availability messages at a predetermined time into the availability portion of the relational travel database.

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28. The apparatus of claim 26, wherein the processor is further configured to:

place the availability message in a queue corresponding to the first travel provider.

29. The apparatus of claim 28, wherein the processor is further configured to:

process the availability message corresponding to the first travel provider in parallel with an additional availability message corresponding to a second travel provider.

30. The apparatus of claim 26, wherein the processor is further configured to:

add the availability message to an alternative processing queue if the one or more affected travel segments are not found in the schedule portion of the relational database.

31. The apparatus of claim 26, wherein the processor is further configured to:

determine one or more travel legs corresponding to each of the one or more affected travel segments, including an origin leg and a destination leg;

determine a leg number for each of the one or more travel legs;

write a record to the availability portion of the relational database based on a status portion the availability message for each identified affected travel segment.